



**UNITED STATES DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Northwest Region  
7600 Sand Point Way N.E., Bldg. 1  
Seattle, WA 98115

Refer to:  
OSB1998-0942

April 24, 1998

Jim Daugherty  
Federal Emergency Management Agency  
Region X  
130 228th Street, Southwest  
Bothell, Washington 98021-9796

RE: Consultation on West Fork of Evans Creek Habitat  
Improvement Project

Dear Mr. Daugherty:

This responds to your request for consultation under Section 7 of the Endangered Species Act on the effects of proposed habitat improvement measures on the West Fork of Evans Creek, Jackson County, Oregon, on listed and proposed anadromous salmonids, received by the National Marine Fisheries Service (NMFS) on November 17, 1997. The habitat improvements you propose to fund would consist of the placement of about 40 whole trees into 10 to 15 pools in a 0.9 mile section of the creek, along with plantings of conifer seedlings in the riparian zone on the south side of the creek. In a December 12, 1997 telephone conversation with Dan Kenney, of my staff, you discussed the likelihood of incidental take due to the proposed action, and the subsequent necessity that a formal consultation be conducted.

The Southern Oregon/Northern California (SONC) coho salmon (*Oncorhynchus kisutch*) has been listed as threatened under the Endangered Species Act (ESA) by the National Marine Fisheries Service (NMFS) (May 6, 1997, 62 FR 42588). Critical habitat for SONC coho, which occur between Cape Blanco, Oregon, and Punta Gorda, California was proposed by the NMFS on November 25, 1997 (62 FR 62741). KMP steelhead, which occur between Cape Blanco, Oregon and the Klamath River Basin in California, were originally proposed for listing as threatened in 1995 (March 16, 1995, 60 FR 14253; August 9, 1996, 61 FR 41541). NMFS has since determined that KMP steelhead are not presently warranted for listing (March 19, 1998; 63 FR




13347). SOCC chinook, which occur between Cape Blanco, Oregon and Point Bonita, California were proposed for listing as threatened under the ESA on March 9, 1998 (63 FR 11481). Critical habitat for SOCC chinook was proposed by the NMFS concurrent with the proposed ESA listing.

Enclosed is the biological opinion on the West Fork Evans Creek habitat improvement project, authorizing the incidental take of SONC coho that is likely to be caused by this

action, provided that the terms and conditions of the incidental take statement are met. Included in the biological opinion are two conservation recommendations which we believe would greatly enhance the long-term efficacy of the project. If you have any questions regarding this opinion, please contact Dan Kenney, Fishery Biologist at (541) 957-3385.

Sincerely,

A handwritten signature in dark ink, appearing to read "William Stelle, Jr.", is written over a light blue rectangular background.

William Stelle, Jr.  
Regional Administrator

cc: Jerry Vogt, ODFW  
Steve Wille, U.S. Fish and Wildlife Service

Endangered Species Act - Section 7  
Consultation

**BIOLOGICAL OPINION**

Effects of West Fork Evans Creek Habitat Improvement Project  
on Southern Oregon/Northern California Coho Salmon

Agency: Federal Emergency Management Agency

Consultation Conducted By: National Marine Fisheries  
Service, Northwest Region

Date Issued: March 22, 1998

Refer to: OSB1998-0942

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ATTACHMENT 2	APPLICATION OF ENDANGERED SPECIES ACT STANDARDS TO: UMPQUA RIVER CUTTHROAT TROUT, OREGON COAST COHO SALMON, SOUTHERN OREGON/NORTHERN CALIFORNIA COHO SALMON, OREGON COAST STEELHEAD, KLAMATH MOUNTAIN PROVINCE STEELHEAD, LOWER COLUMBIA STEELHEAD, CHUM SALMON, CHINOOK SALMON, AND SEA-RUN CUTTHROAT TROUT
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## **I. Background**

The Southern Oregon/Northern California (SONC) coho salmon (*Oncorhynchus kisutch*) has been listed as threatened under the Endangered Species Act (ESA) by the National Marine Fisheries Service (NMFS) (May 6, 1997, 62 FR 42588). Critical habitat for SONC coho was proposed by the NMFS on November 25, 1997 (62 FR 62741). SONC coho occur between Cape Blanco, Oregon, and Punta Gorda, California. KMP steelhead, which occur between Cape Blanco, Oregon and the Klamath River Basin in California, were originally proposed for listing as threatened in 1995 (March 16, 1995, 60 FR 14253; August 9, 1996, 61 FR 41541). NMFS has since determined that KMP steelhead are not presently warranted for listing (March 19, 1998; 63 FR 13347). SOCC chinook, which occur between Cape Blanco, Oregon and Point Bonita, California were proposed for listing as threatened under the ESA on March 9, 1998 (63 FR 11481). Critical habitat for SOCC chinook was proposed by the NMFS concurrent with the proposed ESA listing.

In a letter dated November 13, 1997, the Federal Emergency Management Agency (FEMA) requested consultation for habitat improvement activities on the West Fork of Evans Creek (West Fork) in the northwestern portion of Jackson County, Oregon. The proposed activities would consist of the placement of approximately 40 trees in 10-15 existing pools in a 0.9 mile section of the stream. The stream reach is near Elderberry Flat, in Township 33S, Range 3W, Section 32, on privately-owned land (Silver Butte Timber Company). The trees would be placed in the West Fork with heavy equipment between June 15 and September 15, 1998. As part of the habitat improvement project, conifers would be planted in the riparian area on the south side of the restoration reach.

The November 13, 1997 letter from FEMA also included detailed information on the proposed design of the project and on its potential adverse effects, which the NMFS will accept as a Biological Assessment (BA). Additional information on the proposed project was obtained from Mr. Jerry Vogt, of the Oregon Department of Fish and Wildlife (ODFW). While FEMA is providing major funding, planning and implementation of the project are the responsibility of the ODFW. Various private organization will also donate funds and services for the project, and the Bureau of Land Management (BLM) has agree to donate the trees for in-stream placement. Based on the information provided in the November 13 FEMA letter, and in December 1, 1997 and January 29, February 9, 18, 19, and 24, and March 2, 1998 telephone conversations/electronic mail between Mr. Vogt of ODFW and NMFS staff, it appeared likely that SONC coho and KMP steelhead would be present at the proposed project site during the in-water work window. In a December 12, 1997, telephone conversation, NMFS staff discussed with Mr. Jim Daugherty, FEMA, the necessity of formal consultation for SONC coho.

The objective of this biological opinion is to determine whether the West Fork Evans Creek Habitat Improvement Project is likely to jeopardize SONC coho salmon, listed as threatened under the ESA, or result in destruction or adverse modification of proposed critical habitat for SONC coho salmon.

Although NMFS expects some effects to individual fish and their habitat from these actions, the effects are expected to be insignificant because of project design and timing, and the long-term effects of the action should be beneficial. This biological opinion considers effects to salmonid habitat which are relevant to the jeopardy determination.

## **II. Proposed Action**

The “proposed action” is the addition of approximately 40 trees, complete with limbs and roots, to 10 to 15 pools in approximately 0.9 miles of the West Fork in the vicinity of Elderberry Flat (Township 33S, Range 3W, Section 32). The reach at issue extends from the eastern section line upstream nearly to the crossing of BLM road 34-4-15.1. The trees would be added to the stream with heavy machinery (an excavator or log loader). The machinery would be able to place most of the logs without entering the stream or destroying riparian vegetation, using existing adjacent road and open areas. Placement of some of the logs, however, would require the machinery to enter the stream at up to three points and to move within the stream channel for up to one-quarter of a mile. The work is proposed to occur between June 15 and September 15, 1998.

In addition, conifers seedlings (likely Douglas-fir, ponderosa pine, western hemlock, and western red-cedar) would be planted in the riparian zone on the south side of the creek in the spring of 1999. (The landowner planted conifers seedlings on the north side of the stream, to the BLM 34-3-24 road, in the spring of 1997). The seedlings would be planted on a 9-foot by 9-foot grid along the in-stream improvement reach, up to about 300 feet from the stream. Similar to 1997, areas in the improvement reach where sufficient conifer density currently exists or where soil conditions are inadequate would not be planted; ODFW estimates that approximately 0.6 miles of the 0.9 mile reach are suitable for planting. Existing riparian vegetation would not be removed or killed to facilitate seeding growth.

## **III. Biological Information and Critical Habitat**

The listing status, biological information, and critical habitat elements for SONC coho salmon are described in Attachment 1. While critical habitat has not been designated for SONC coho salmon, the attachment describes potential critical habitat elements for these species. Some site-specific information is provided below.

Evans Creek is a major tributary to the middle Rogue River. The West Fork is tributary to Evans Creek, flowing predominantly south for about 17 miles before entering the mainstem at about stream mile 20. Recent stream surveys by ODFW reveal that habitat conditions are degraded, primarily by sediment deposition and low density of large woody debris in the stream channel (RVCOG 1997a). While habitat conditions are not ideal, the West Fork still supports the majority of anadromous fish spawning in the drainage (RVCOG 1997a). Both SONC coho salmon and KMP steelhead (summer and winter runs), as well as cutthroat trout, inhabit the West Fork and its tributaries (RVCOG 1997b). Spawning by both coho and steelhead is known to occur in the proposed project area of the West

Fork (Personal communication, Jerry Vogt, ODFW to Dan Kenney, NMFS, 12/1/97), so rearing juveniles of both species are likely to be present during the project. Emergence of coho salmon fry should be complete in March, while emergence of summer and winter steelhead fry should continue into April and June, respectively (Personal communication, Jerry Vogt, ODFW to Dan Kenney, NMFS, 1/29/98). Outmigrating smolts from upstream of the project area, as well as adult summer-run KMP steelhead may also be present in the project area.

#### **IV. Evaluating Proposed Actions**

The standards for determining jeopardy are set forth in Section 7(a)(2) of the ESA as defined by the consultation regulations (50 C.F.R. Part 402). Attachment 2 describes how NMFS applies the ESA jeopardy and destruction/adverse modification of critical habitat standards.

As described in Attachment 2, the first steps in applying the ESA jeopardy standards are to define the biological requirements of the listed species and to describe the current status as reflected by the environmental baseline. In the next steps, NMFS' jeopardy analysis considers how proposed actions are expected to directly and indirectly affect specific environmental factors that define properly functioning aquatic habitat essential for the survival and recovery of the species. This analysis is set within the dual context of the species' biological requirements and the existing conditions under the environmental baseline (defined in Attachment 1). The analysis takes into consideration an overall picture of the beneficial and detrimental activities taking place within the action area. If the net effect of these activities is found to jeopardize the listed species, then NMFS must identify any reasonable and prudent alternatives to the proposed action.

##### **A. Biological Requirements**

For this consultation, NMFS finds that the biological requirements of the listed/proposed species are best expressed in terms of environmental factors that define properly functioning freshwater aquatic habitat necessary for survival and recovery of the species. Individual environmental factors include water quality, habitat access, physical habitat elements, channel condition, and hydrology. Properly functioning watersheds, where all of the individual factors operate together to provide healthy aquatic ecosystems, are also necessary for the survival and recovery of the listed/proposed species. This information is summarized in Attachment 1.

##### **B. Environmental Baseline**

Current range-wide status of species under environmental baseline. NMFS described the current population status of the SONC coho in its status review (Weitcamp et al., 1995) and in the final rule (May 6, 1997, 62 FR 24588). The recent range-wide status of this species is summarized in Attachment 1. In the absence of adequate population data, habitat condition provides a means of evaluating the status of these species for the environmental baseline assessment.

Current status of proposed/listed species under environmental baseline within the action area. The “action area” is defined as “all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action” (50 CAR 402.02). The general action area can be defined as the West Branch and riparian areas of the project site (Section 32) and the West Branch for a few miles upstream and downstream of the project site. Both SONC coho and KMP steelhead use the action area seasonally for spawning, and as a migration corridor, and the action area is used by both species as rearing habitat year-around. The environmental baseline of the action area is dominated by conditions rated largely as “at risk” or “not properly functioning” (see Table 1). These conditions are likely the result of forest management practices, including road construction.

Based on the best information available on the current status of SONC coho and KMP steelhead (Attachment 1), NMFS assumptions given the information available regarding population status, population trends, and genetics (see Attachment 2), and the relatively poor environmental baseline conditions within the action area (see Table 1, below, SONC coho final listing rule, and KMP steelhead proposed listing rule), NMFS concludes that not all of the biological requirements of the proposed and listed species within the action area are currently being met under the environmental baseline. Actions that do not retard attainment of properly functioning aquatic conditions when added to the environmental baseline would not jeopardize the continued existence of anadromous salmonids.

## **V. Analysis of Effects**

### **A. Effects of Proposed Action**

The effects determination in this opinion were made using a method for evaluating current aquatic conditions (the environmental baseline) and predicting effects of actions on them. This process is described in the document “Making ESA Determinations of Effect for Individual or Grouped Actions at the Watershed Scale” (NMFS 1996). This assessment method was designed for the purpose of providing adequate information in a tabular form for NMFS to determine the effects of actions subject to consultation. The effects of actions are expressed in terms of the expected effect (restore, maintain, or degrade) on aquatic habitat factors in the project area.

The results of the completed checklist for the proposed action provides a basis for determining the overall effects on the environmental baseline in the action area. The action covered in this opinion was shown to maintain environmental factors over the long-term (more than one year) that could potentially be affected by the proposed project (see Table 1 below). Sediment inputs to the West Fork are likely to be increased over the short-term (four months or less) by the project due to in- and near-water activities, such as heavy machinery movement and manipulation of trees. Implementation of the proposed measures to reduce sediment inputs, such as a restricted in-water work window and the use of only a few stream entry points, will minimize sediment effects and maintain the existing environmental baseline for sediment over the long-term. Long-term effects of the in-stream tree placement likely



include bank stabilization, and other forms of sedimentation reduction. Nevertheless, short-lived adverse effects such as temporary increases in sediment have the potential to result in incidental take.

Table 1. Summary checklist of environmental baseline and effects of the North Fork Evans Creek habitat improvement project on relevant indicators. Short-term (less than 1 year) impacts on relevant indicators are denoted by a minus (-) sign, and are not expected to alter the existing environmental baseline.

ENVIRONMENTAL BASELINE			EFFECTS OF THE ACTION(S)		
<u>PATHWAYS</u>					
INDICATORS	Properly <sup>1</sup> Functioning	At Risk <sup>1</sup>	Not Properly <sup>1</sup> Functioning	Restore <sup>1</sup>	Maintain <sup>1</sup> Degrade <sup>1</sup>
<u>Water Quality:</u>					
Temperature			X	X	
Sediment			X	X	X(-)
Chem. Contam./Nutr.	X			X	
<u>Habitat Access:</u>					
Physical Barriers			X	X	
<u>Habitat Elements:</u>					
Substrate			X	X	
Large Woody Debris		X		X	
Pool Frequency		X			X
Pool Quality		X		X	
Off-channel Habitat		X			X
Refugia		X		X	
<u>Channel Conditions:</u>					
Width/Depth Ratio		X		X	
Streambank Cond.		X		X	X(-)
Floodplain Connectivity		X		X	
<u>Watershed Conditions:</u>					
Road Density/Loc.			X	X	
Disturbance History		X		X	
Riparian Reserves			X		X(-)

<sup>1</sup> These three categories of function (“properly functioning”, “at risk”, and “not properly functioning”) and the three effects (“restore”, “maintain”, and “degrade”) are defined for each indicator in NMFS (1996).

Similarly, short-term adverse effects on the streambank condition and riparian function may occur. The heavy machinery will enter the stream at up to three points, and placement of trees from the shoreline is likely to produce at least a small amount of damage to riparian vegetation. Adverse effects on streambank conditions should be confined to the in-stream work period. Plantings of native perennial vegetation, such as willows, should ensure that long-term adverse effects do not occur. In addition, the required plantings should quickly replace existing vegetation that may be damaged or destroyed.

Plantings of conifers on the south side of the creek should have no adverse effect, and should, eventually, help to restore riparian and in-stream functions.

Attachment 3 lists general minimization and avoidance measures regarding in-water work, erosion control, hazardous materials, riparian impacts, and monitoring. These measures are used by the Oregon Department of Transportation, but are directly applicable to the proposal here addressed. Sediment inputs are likely to result from the proposed action due to in-water work, but are expected to be temporary and localized. State regulations require that turbidity not exceed 10 percent above background from more than two hours. A number of measures would be implemented to reduce sedimentation (see Attachment 3). All control devices would be inspected daily during periods of precipitation and weekly during dry periods.

Hazardous material storage, refueling areas, and maintenance areas would be located no closer than 50 feet to the creek. External grease and oil would be removed from equipment used for in-water work prior to use within the 2-year flood plain. A Pollution Control Plan (including a spill response plan) would be developed.

In addition to short-term effects on sedimentation, streambank condition, and riparian reserves, the proposed project may result in direct incidental take of SONC coho salmon and/or KMP steelhead if fish are present in the immediate work area when work is being carried out. The proposed project will require the operation of heavy equipment within the West Fork, and manipulation of large trees within the stream. Either of these actions could harm, harass, or otherwise incidentally take SONC coho or KMP steelhead. These direct effects will be minimized by the proposed project guidelines, such as limiting the in-water work window, and entering the stream with heavy equipment only where access from the bank is not possible, or would cause greater habitat damage. Long-term adverse effects to SONC coho salmon and KMP steelhead are not likely to occur if the proposed and required measures are performed.

**B. Effects of Interrelated and Interdependent Actions.** Interrelated and interdependent actions are those that would not occur but for the proposed action. The proposed action will likely enhance instream habitat for aquatic organisms, including SONC coho salmon and KMP steelhead, which may lead to larger populations of these species. Many other factors affect anadromous salmonid populations, however, and many concurrent actions are taking place which are intended to increase

salmon and steelhead numbers in the Pacific Northwest. Thus, the proposed action will not result in actions that would not otherwise occur.

**C. Cumulative Effects.** Cumulative effects are defined in 50 CAR 402.02 as "those effects of future State or private activities, not involving Federal activities, that are reasonably certain to occur within the action area of the Federal action subject to consultation." The "action area" for this consultation is the stream and riparian area of the West Fork in Section 32 and the West Fork upstream and downstream of the site for a few miles. Future Federal actions, including land management activities, are being (or have been) reviewed through separate section 7 consultation processes. In addition, non-Federal actions that require authorization under section 10 of the ESA will be evaluated in section 7 consultations. Therefore, these actions are not considered cumulative to the proposed action. NMFS is not aware of any future new (or changes to existing) State and private activities within the action area that would cause greater impacts to listed species than presently occurs. NMFS assumes that future private and State actions will continue at similar intensities as in recent years.

## **VI. Conclusion**

NMFS has determined that, based on the available information, the improvements to the West Fork Evans Creek habitat improvements are not likely to jeopardize the continued existence of SONC coho salmon or KMP steelhead, or result in the destruction or adverse modification of critical habitat for SONC coho salmon. While the NMFS believes that the proposed introduction of whole trees into the West Fork is likely to improve habitat conditions to a small to moderate extent for a few years or decades, the long-term health of the watershed and its biotic components is dependent upon the re-establishment of natural processes. The proposed plantings of conifer seedlings should contribute to improvement of the riparian zone at the subject site over a period of decades to centuries.

NMFS used the best available scientific and commercial data to apply its jeopardy analysis (described in Attachment 2), when analyzing the effects of the proposed action on the biological requirements of the species relative to the environmental baseline (described in Attachment 1), together with cumulative effects. NMFS applied its evaluation methodology (NMFS 1996) to the proposed action and found that it would cause minor, short-term adverse degradation of anadromous salmonid habitat due to sediment impacts. Both listed species could be present in the action area during the in-water work period of June 15 through September 15. Incidental take could result from noise and vibration caused by in-water heavy equipment movement and tree placement. Direct mortality to a few juvenile salmonids due to crushing during in-water equipment movement may be possible, but destruction of redds containing eggs or fry is not expected to occur, because emergence of fry should be complete before the action begins.

In the long-term, NMFS expects that the instream placement of trees should improve habitat conditions in the action area for juvenile and adult salmonids by providing cover and microhabitat complexity for

aquatic organisms, and by influencing stream channel morphology and sediment storage and routing (Hicks et al. 1991). Riparian plantings of willows and other native species in disturbed areas should quickly replace the small amount of riparian vegetation lost during construction. In the long term, conifers to be planted on the south side of the stream, when mature, should aid in maintenance of riparian functions such as shade, large woody debris, etc. NMFS does not expect that potential effects from the proposed action, including short-term sediment input, construction noise and vibration, and the possibility of a small amount of direct mortality due to in-water activity, would result in reduced prespawning survival, egg-to-smolt survival, or upstream/downstream migration survival rates to a level that would appreciably diminish the likelihood of survival and recovery of these species.

## **VII. Conservation Recommendations**

Section 7(a)(1) of the ESA directs Federal agencies to utilize their authorities to further the purposes of the ESA by carrying out conservation programs for the benefit of threatened and endangered species. Conservation recommendations are discretionary measures suggested to minimize or avoid adverse effects of a proposed action on listed species, to minimize or avoid adverse modification of critical habitat, or to develop additional information. The NMFS believes the following conservation recommendations are consistent with these obligations, and therefore should be implemented by FEMA:

1. No further timber harvest should occur within a Riparian Management Zone (RMZ) of one site potential tree (approximately 150 feet) along the subject reach of the West Fork of Evans Creek. This will allow the existing riparian vegetation, especially conifers, and the conifer seedlings planted as a part of the subject action, to function fully over time as habitat elements for anadromous salmonids.
2. The impact of roads within or potentially affecting the RMZ or the West Fork in the vicinity of the project reach should be analyzed. Roads which are determined to hinder the attainment of properly functioning conditions in the West Fork, through sediment delivery, alteration of hydrologic functions, etc., should be rehabilitated and/or obliterated.

## **VIII. Reinitiation of Consultation**

Consultation must be reinitiated if: the amount or extent of taking specified in the Incidental Take Statement is exceeded, or is expected to be exceeded; new information reveals effects of the action may affect listed species in a way not previously considered; the action is modified in a way that causes an effect on listed species that was not previously considered; or, a new species is listed or critical habitat is designated that may be affected by the action (50 CAR 402.16).

Based on the information in the BAs, NMFS anticipates that an unquantifiable amount of incidental take could occur as a result of the actions covered by this Biological Opinion. To ensure protection for a

species assigned an unquantifiable level of take, reinitiation of consultation is required: (1) if any action is modified in a way that causes an effect on the listed species that was not previously considered in the BAs and this Biological Opinion; (2) new information or project monitoring reveals effects of the action that may affect the listed species in a way not previously considered; or (3) a new species is listed or critical habitat is designated that may be affected by the action (50 CAR 402.16).

## **IX. References**

Section 7(a)(2) of the ESA requires biological opinions to be based on "the best scientific and commercial data available." This section identifies the data used in developing this opinion, in addition to the BA.

Busby, P.J., T.C. Wainwright, and R.S. Waples. 1994. Status review for Klamath Mountains Province steelhead. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-19, 130 pp.

Hicks, B.J., J.D. Hall, P.A. Bisson, and J.R. Sedell. 1991. Responses of salmonids to habitat changes. American Fisheries Society Special Publication 19:483-517.

NMFS (National Marine Fisheries Service). 1996. Making Endangered Species Act determinations of effect for individual and grouped actions at the watershed scale. Habitat Conservation Program, Portland, Oregon.

RVCOG (Rogue Valley Council of Governments). 1997a. Southwest Oregon salmon restoration initiative, Phase 1: A plan to stabilize the native steelhead population in southwest Oregon. Central Point, Oregon.

RVCOG (Rogue Valley Council of Governments). 1997b. Southwest Oregon salmon restoration initiative, Phase 1: A plan to stabilize the native coho population in southwest Oregon. Central Point, Oregon.

Weitcamp, L.A., T.C. Wainwright, G.J. Bryant, G.B. Milner, D.J. Teel, R.G. Kope, and R.S. Waples. 1995. Status review of coho salmon from Washington, Oregon, and California. U.S. Department of Commerce, NOAA Technical Memorandum NMFS-NWFSC-249, 258 pp.

## **X. Incidental Take Statement**

Sections 4 (d) and 9 of the ESA prohibit any taking (harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect, or attempt to engage in any such conduct) of listed species without a specific permit or exemption. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as

breeding, feeding, and sheltering. Harass is defined as actions that create the likelihood of injuring listed species to such an extent as to significantly alter normal behavior patterns which include, but are not limited to, breeding, feeding, and sheltering. Incidental take is take of listed animal species that results from, but is not the purpose of, the Federal agency or the applicant carrying out an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to, and not intended as part of, the agency action is not considered prohibited taking provided that such taking is in compliance with the terms and conditions of this incidental take statement.

An incidental take statement specifies the impact of any incidental taking of endangered or threatened species. It also provides reasonable and prudent measures that are necessary to minimize impacts and sets forth terms and conditions with which the action agency must comply in order to implement the reasonable and prudent measures.

#### **A. Amount or Extent of the Take**

The NMFS anticipates that the action covered by this Biological Opinion (West Fork Evans Creek habitat improvement project) has more than a negligible likelihood of resulting in incidental take of SONC coho and KMP steelhead because of short-term increases in sediment levels and the potential for direct incidental take during in-water work (in-stream movement of heavy equipment and placement of trees). Effects of actions such as these are largely unquantifiable in the short term, and are not expected to be measurable as long-term effects on the species' habitat or population levels. Therefore, even though NMFS expects some low level incidental take to occur due to the actions covered by this Biological Opinion, the best scientific and commercial data available are not sufficient to enable NMFS to estimate a specific amount of incidental take to the species itself. In instances such as these, the NMFS designates the expected level of take as "unquantifiable." Based on the BAs and other information, NMFS anticipates that an unquantifiable amount of incidental take could occur as a result of the actions covered by this Biological Opinion.

#### **B. Reasonable and Prudent Measures**

The NMFS believes that the following reasonable and prudent measures are necessary and appropriate to minimize the take of SONC coho and KMP steelhead:

1. FEMA shall minimize the potential for direct incidental take of SONC coho and KMP steelhead due to sedimentation and operation of heavy equipment in-water.

#### **C. Terms and Conditions**

In order to be exempt from the prohibitions of section 9 of the ESA, FEMA must comply with the following terms and conditions, which implement the reasonable and prudent measures described above. These terms and conditions are non-discretionary.

- 1a. Applicable minimization/avoidance measures listed in Attachment 3 for in-water work, erosion control, hazardous materials, riparian impacts, and monitoring shall be implemented for the proposed action in accordance with the terms and objectives of Attachment 3. Although Attachment 3 specifically deals with road-construction and maintenance activities of the Oregon Department of Transportation, the measures, terms, and objectives are potentially applicable to the proposed action.
- 1b. All work within the active flowing channel (in-water work) shall occur between June 15 and September 15.
- 1c. If riparian vegetation is destroyed during the project, the vegetation shall be replaced at the project site with native species to the maximum extent horticulturally possible.